Discovering Cell Mechanisms

significance to the Vesalian advance in Anatomy, or to the classical development of microscopic anatomy in the nineteenth century," he argued,

It is already evident that the publication outlets for this important field are inadequate. The requirements are that the publication journal be able to reproduce high resolution electron micrographs, or other illustrative material with a wealth of fine detail, and that the editorial policies of the journal lend themselves to publication of work of this kind. At present, the *Journal of Experimental Medicine* and the *Journal of Histochemistry* in this country and *Experimental Cell Research* and *Biochemica et Biophysica Acta* are preparing halftone engravings of the necessary quality, but the purposes of these journals are such that only a few cytological papers can be accommodated. The editorial practices of the *Anatomical Record* and the *American Journal of Anatomy* likewise lend themselves to the accommodation of some cytological papers of the sort under discussion, but the quality of the half-tone engravings in these journals is very poor, and suitable reproduction of high resolution micrographs is unsatisfactory.⁷

Schmitt (letter to Bronk of 9 February 1954), on the other hand, raised the concern that the new journal would be too focused on electron microscopy. He contended, "We now have journals which publish morphological work (J. Morph., Exp. Cell Res., J. C. C. P., J. Exp. Med., B.B.A., and many others); I take it we are not proposing to found essentially a 'Journal of Electron Microscopy.'" He characterized the new journal as "devoted to biology at the molecular (or near-molecular) level":

Accordingly, what I should hope would be brought together in one journal would be micromorphology by direct methods (electron microscopy, UV, phase contrast, interference and other types of microscopes) and by indirect methods (X-ray diffraction, polarization optics) together with physical chemical investigations of the shapes, sizes and properties of particles (particularly macromolecules of biological interest) *in solution* (e.g., ultracentrifuge, electrophoresis, light scattering, streaming birefringence, viscosity and diffusion). Of course the aim of all of this is the detailed characterization of protoplasmic constituents ⁸

Schmitt was himself an important contributor to the development of electron microscopy, although primarily of viruses. His focus, however, was more broadly biophysical.

⁷ Folder 10, box 1, RU 518, Rockefeller University Archives, RAC.

⁸ Folder 10, box 1, RU 518, Rockefeller University Archives, RAC.